

CURRENT AND AVERAGE PRICES FOR USE IN FARM PLANNING

Ohio, 1961

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Introduction

Every farm manager makes many decisions that require consideration of future prices. Choosing between alternative plans for the use of available resources is an important managerial function. The primary purpose of planning or budgeting is to select the best course of action to achieve maximum future returns. Although we have little insight into the future, there are several tools and guides available to help us select our best alternative.

The Planning Horizon

Two quite different horizons must be kept in mind when making farm plans. First is an organizational or long run horizon which is far enough in the future that resources such as machinery and buildings, will be worn out and must be replaced to continue in production. Acquisition of long lived productive inputs is usually based on the assumption that they can be used efficiently until fully consumed or depreciated. This horizon may encompass 15 to 30 or more years.

A second shorter horizon is used for making current or operational decisions. This may be one year or one production cycle which in the case of crops consists of a season.

A Look in the Tool Box

Past prices provide one of the very useful tools in predicting future price relationships. Over periods of time prices tend to have a similar relationship one to another. Some of these relationships have been used as norms or standards (corn-hog ratios).

Historical price movements such as trends, cycles, and seasonal changes provide the farm manager with another useful tool. Price trends reflect changes that encompass several production cycles and show the effects of changes in our

total economy. Cyclical movements, such as the cattle cycle, are related to the time required to expand or contract an enterprise.

Seasonal price changes are directly related to the production of a commodity during the year. Corn is usually at its lowest price during harvest and increase as the season progresses, dropping at the end of the feeding period or when the next crop is ready for harvest.

Guides

Past prices and price relationship can be very helpful to a manager in testing and evaluating his alternatives. However, it must be remembered that agriculture is not a separate distinct isolated segment of our national economy. Every manager should be aware of seasonal fluctuations, his position in the cycle and expected changes in the general economy.

The planning period under consideration is important when selecting the prices to use. Ideally we need to use the prices that will be realized as each part of the plan becomes operational. Current prices with minor adjustments for the position in the cycle may be our best estimate of next year's prices. For a longer planning period, an average of a period of years including both the high and low of one or several cycles, may provide the best price estimate. In any event the set of prices selected should be sufficiently recent to reflect comparable technology and long enough to average out one cycle.

Generally, commodities produced on farms and commodities such as processed feeds tend to rise and fall with the demand for farm products. However, items used in farm production such as, fuel, machinery and utilities tend to be sticky and change slowly.

Summing Up

A farm manager must constantly estimate future prices of items he will need for production and of commodities he will have available for sale. No one set of

prices is adequate to meet all of these needs. These tools and guides can be used to help select a desirable plan and accurately estimate anticipated future income. Adjustments must be made when selecting any set of prices for a particular farm program. Advantages of location, personal contacts, and operating conditions make each farm situation an individual consideration.

Livestock and Livestock Product Prices Received by Ohio Farmers

Item	Price Per Cwt.		
	21 Year Average (1936-1956)	5 Year Average (1956-1960)	Average (1960)
Market Hogs (200-220#)	\$16.17	\$17.47	\$16.65
Sows	14.30	14.71	13.43
Slaughter Lambs	18.36	22.02	20.06
Feeder Lambs	16.32	19.99	18.26
Ewes	7.76	6.47	5.79
Veal calves	19.78	27.46	28.07
Cull Cows:			
Commercial	13.81	16.28	16.21
Canners and Cutters	9.73	14.25	15.00
Beef Steers (900-1100#):			
Prime	21.70	27.54	27.82
Choice	19.79	25.52	26.24
Good	17.11	23.68	24.80
Wool (per lb. including govt. payment)	0.46	0.43	0.46
Eggs (per dozen)	0.35	0.39	0.34
Cull hens	0.22	0.15	0.14
Broilers	---	0.19	0.18
Turkeys	---	0.25	0.25
Fluid Milk Blend (\$/cwt. delivered to plant)		4.51	4.50
Manufacturing Milk (\$/cwt. delivered to plant)		3.38	3.44

Grain and Hay Prices Received by Ohio Farmers

Item	21 Year Average (1936-1956)	5 Year Average (1956-1960)	Average (1960)
<u>Grain (\$/bu.)^{1/}</u>			
Corn	\$1.16	\$1.16	\$1.03
Oats	0.65	0.65	0.66
Wheat	1.59	1.84	1.81
Soybeans	1.99	2.15	2.03
Barley	0.95	0.89	0.85
<u>Hay (\$/ton)^{2/}</u>			
Alfalfa	\$19.64	\$23.00	\$23.77
Mixed (clover & timothy)	16.58	19.98	20.28

^{1/} Grain prices are delivered at elevator. Conditioning and hauling charges must be deducted to get net farm price.

^{2/} Average price of all cuttings, baled.

Feeder Cattle Prices Paid at Kansas City

Item	21 Year Average (1936-1956)	5 Year Average (1956-1960)	Average (1960)
<u>Feeder Steers (300-500#)*</u>			
February	\$17.50	\$26.23	\$29.28
April	18.06	27.73	30.01
June	17.00	27.29	28.52
August	17.62	26.95	25.97
October	16.98	26.89	26.04
December	17.45	26.92	-----
<u>Feeder Steers (Good, 500-800#)*</u>			
February	15.78	22.42	24.59
April	16.37	23.87	25.69
June	16.57	23.65	24.37
August	16.15	22.94	22.66
October	15.52	22.59	-----
December	15.55	22.66	-----

* Heifer prices were \$2.50 - 3.00/cwt. less than steer prices. Choice grade feeder steer prices averaged about \$2.50/cwt. above Good grade prices.

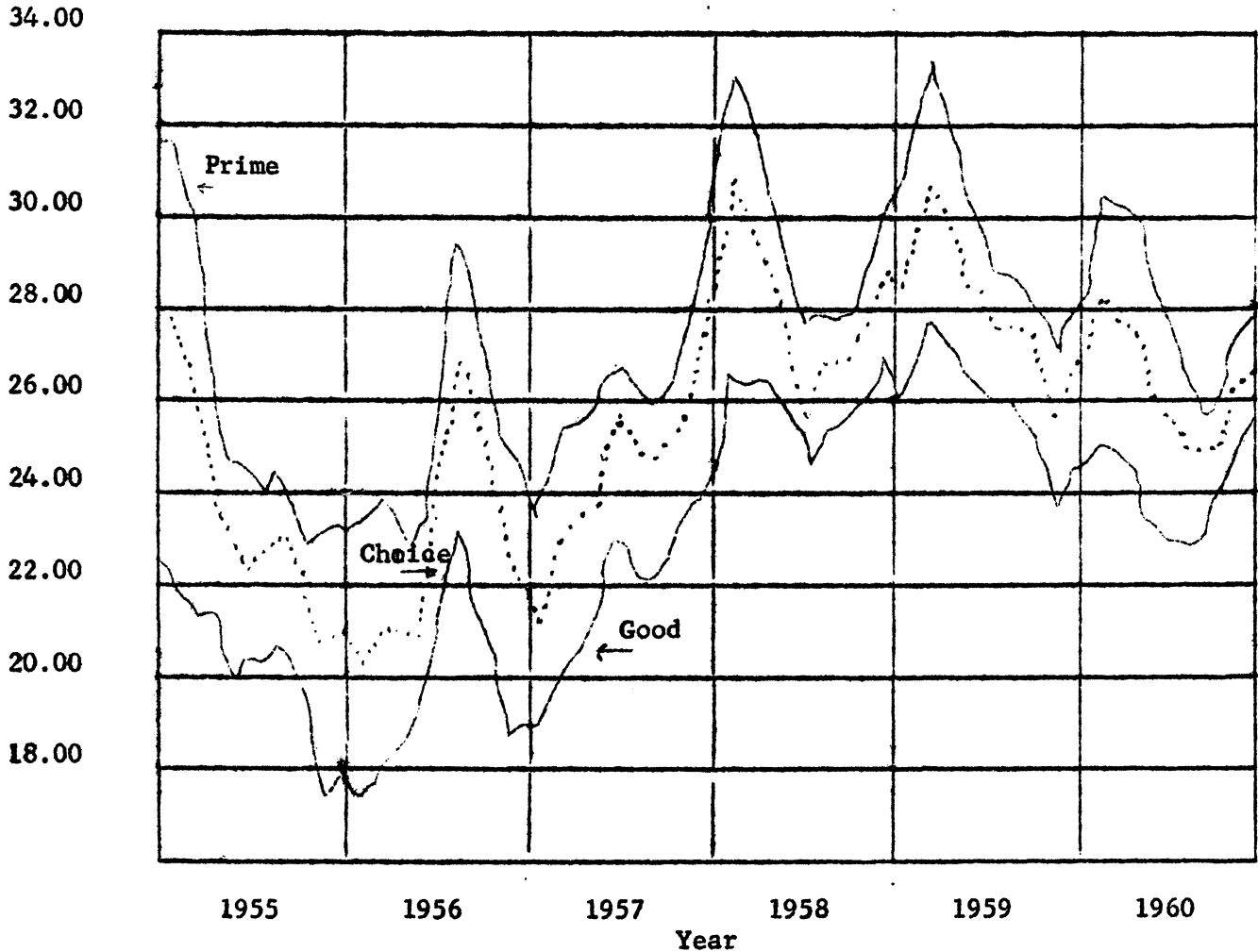
Source: Livestock Situation, Market News Livestock Division, and Agricultural Prices.

The costs of getting the animals from Kansas City to Ohio rail stations (commission, yardage and freight) were an additional \$2.00/cwt. Trucking charges from the rail station or sales pavillion were 25¢ to 50¢ per hundred weight depending upon the distance hauled.

Southeastern Ohio cattle delivered in the feedlot cost about the same price as comparable grade animals in Kansas City. The delivered farm cost of cattle purchases from Kansas City was \$1.50 to \$2.00 per hundred weight higher than Southeastern Ohio cattle.

Average Monthly Prices of 900-1100# Slaughter Steer,
by Grade, Chicago, 1955-1960*

Dollars per cwt.



*Note that the seasonal price peak did not occur during the same month each year and is influenced by the position of the long time cycle. The price spread was about \$2.00 per hundredweight between the prime and choice grades and about \$2.50 between the choice and good grade cattle.

Retail Prices of Commercial Feeds
Per Hundredweight, Ohio, 1960

Feed	Price
Bran	\$3.15
Middlings	3.23
Cottonseed meal (41%)	4.57
Soybean meal (44%)	4.14
Meat scraps	5.02
Pig starter	4.95
Mixed Hog Feeds (14-18%)	3.99
Mixed Hog Feeds (29%+)	5.17
Beef cattle concentrate (30%+)	4.73
Dairy feed (16%)	3.73
Dairy feed (29%+)	4.96
Laying mash	4.40
Chick starter	4.83
Source: Agricultural Prices	

Retail Prices of Fertilizers
Per Ton, Ohio, 1960

Analysis	Price
<u>Mixed Fertilizers</u>	
3 - 12 - 12	\$49.00 ^{1/}
4 - 16 - 16	60.00 ^{1/}
6 - 24 - 12	71.00 ^{1/}
5 - 20 - 20	74.00 ^{1/}
10 - 10 - 10	61.00 ^{1/}
14 - 14 - 14	75.00 ^{1/}
0 - 25 - 25	68.00 ^{1/}
<u>Nitrogen</u>	
Sulphate of Ammonia (20.5%)	\$51.00
Ammonium Nitrate (33%)	82.00
Anhydrous Ammonia (82%)	170.00
Urea (45%)	110.00
<u>Phosphates</u>	
18% P ₂ O ₅	\$33.50
20% P ₂ O ₅	40.00
45% P ₂ O ₅	78.00
Rock Phosphate	22.50
<u>Agricultural Limestone (At lime plant)</u>	
45% through 100 mesh screen (bulk)	\$2.10 ^{2/}
60% through 100 mesh screen (bulk)	2.80 ^{2/}
98% through 100 mesh screen (bag)	6.50 ^{2/}

^{1/} Bulk fertilizer \$5.00 less per ton.

^{2/} Price at the plant. Hauling and spreading charges of \$3.00 - \$5.00 should be added to the price per ton. The percent which passes through 100 mesh screen is roughly the percent which will become available during the first three years.

Electricity, Telephone and Milk Hauling Expenses
Ohio, 1960

Item	Cost Per Unit
<u>Electricity</u>	<u>Per Month</u>
General Livestock Farm	\$16.00
Dairy Farms	22.00
Dairy-Hog Farms	20.00
Corn-Hog Farms	14.00
Cash Crop-Grain Farms	9.00
<u>Telephone</u>	4.00
<u>Hauling charge for milk</u>	<u>Per Hundred</u>
Bulk	0.25
Cans	0.40

Retail Prices of Purchased Farm Seeds
Ohio, Selected Years

Farm Seeds	Unit	Pound Per Bushel	1956-60 Average	1960 Average
Hybrid seed corn	bu.	56	\$11.02	\$11.40
Soybean seed	bu.	60	3.46	3.29
Red Clover seed	bu.	60	23.58	16.86
Alfalfa seed	bu.	60	19.38	18.96
Sweet Clover seed	bu.	60	6.27	4.74
Alsike Clover seed	bu.	60	16.71	13.50
Timothy seed	bu.	45	8.13	5.76
Brome seed	bu.	14	---	15.60
Orchard Grass seed	bu.	14	---	21.60
Fescue seed	bu.	10--30	---	16.20
Ladino Clover seed	lb.		---	0.89
Birdsfoot Trefoil	lb.		---	0.90

Note: Certified seeds are slightly higher. Sale prices of farm produced seeds are about 80% of the retail price. Cleaning and treating of small grains cost \$.25 per bushel. Cleaning legume seeds cost 1¢ per pound.

Source: Agricultural Prices

Labor, Fuel Consumption, Insurance, Taxes and
Interest Rates, Ohio, 1960

<u>Item</u>	<u>Cost Per Unit</u>
<u>Labor</u>	<u>Wage</u>
Per hour without board	\$ 1.25
Per month -- house, etc. furnished	175.00
Dairy workers per month -- house, etc.	200.00 to 215.00
<u>Fuel and Oil (1959 Ohio Farm Bureau Analysis Reports)</u>	<u>Average Per Crop Acre</u>
General Livestock Farms	\$ 4.05
Dairy Farms	4.55
Dairy-Hog Farms	5.15
Corn-Hog Farms	3.90
Cash Crop-Grain Farms	4.15
<u>Average fuel consumption under rated loads</u> (Nebraska Tractor Tests)	<u>Gallons per Hour</u>
2 - 3 plow tractor (gasoline)	2.6
3 - 4 plow tractor (gasoline)	3.9
3 - 4 plow tractor (diesel)	3.1
5 plow tractor (gasoline)	4.7
5 plow tractor (diesel)	3.6
<u>Gasoline and Oil</u>	<u>Per Gallon</u>
Gasoline (after tax rebate)	0.22
Lubricating Oil	1.25
<u>Insurance, Mutual Companies</u> (Fire, lightning, hail and windstorm)	<u>Per \$1,000 of Coverage</u> \$ 3.60
80% minimum coverage required for buildings and livestock.	
<u>Taxes*</u>	<u>Per \$1,000 Assessed Valuation</u>
Rural Hill land counties	\$22.00 to 28.00
Rural Flat land counties	23.00 to 30.00
Urbanized counties	27.00 to 32.00
* Real Estate is assessed at about 45% Market Valuation. Personal Property is assessed at 50% of Depreciated valuation -- and may not be depreciated below 30% of original value.	
<u>Interests Rates</u>	<u>Percent</u>
Long-term Real Estate Loans	5.75 to 6.00
Intermediate and Short-term Credit	7.00 to 8.00

Machinery and Equipment Prices

The price paid by farmers for machinery and equipment varies considerably. Many things enter into the determination of the price such as the aggressiveness of the Dealer, the machines traded in, the total value of the machine being bargained for, the size of the deal (how many machines and how many dollars are involved), public relations, the possibility of future purchases by the farmer, and the amount of servicing required. Dealers may accept a general pricing policy such as their cost plus a set mark-up of 5 to 18 percent. Some use a discount of the manufacturers suggested retail price.

Other things enter into the price such as the quality of the machine and what is considered as "extras" or "standard equipment" by various machinery companies. The price of a basic machine may vary considerably from one company to another.

Prices quoted on the following pages were computed from the prices quoted for the machines equipped as the farmers most often purchased them. The prices quoted by five machinery companies as their "most usual" selling price were averaged to obtain the prices quoted on the following pages. The general range of prices would be approximately the average price plus or minus 5 percent.

New Machinery Prices Paid by Farmers, 1960

Source: Unpublished M. S. Thesis, Machinery Use and Investment, Donald C. Huffman, U. of Missouri, 1960. Prices were verified with Ohio Machinery Dealers and the Tractor and Equipment Guide published by National Retail Farm Equipment Association.

Machine	Average Price
1/2 ton truck (Pickup)	\$2,257
1 ton truck (Flat bed)	3,600
2 ton truck (Flat bed)	4,293
2 plow tractor (25 - 30 HP)	2,637
3 plow tractor (33 - 38 HP)	3,149 ¹ / ₂
4 plow tractor (39 - 48 HP)	3,855 ¹ / ₂
5 plow tractor (50 - 60 HP)	4,625 ¹ / ₂
¹ / ₂ Diesel tractors \$700 higher.	
2 - 14" plow	293
3 - 14" plow	490
4 - 14" plow	653
5 - 14" plow	913
15' single disc harrow	362
7' tandem disc harrow	334
8' tandem disc harrow	438
10' tandem disc harrow	570
Rotary hoe (per 4' section)	108
Spring harrow (per 4' section)	58
Spike harrow (per 5' section)	41
8' cultimulcher	650
8' field cultivator	362
10' field cultivator	403
2-row tractor cultivator	364
4-row tractor cultivator	743
2-row planter	374
4-row planter	748
11 - 7 grain drill	669
15 - 7 grain drill	873
6' pull-type pto combine*	1,903
8' pull-type pto combine*	2,400
10' self-propelled combine	6,205
12' self-propelled combine	7,198
* With aux. motor \$400 extra.	
7' tractor mower	424
Side delivery rake	542
Square-type pto string tie baler*	2,050
Round-type pto baler	1,700
Hay conditioner	795
* With aux. motor \$400 extra.	

1-row corn picker	\$1,562
2-row corn picker	2,508
2-row self-propelled corn combine	6,205
2-row picker attachment for combine	1,466
Sheller attachment for 2-row picker	630

Forage Harvesters (6 knife cutter)

Base unit (pto)	1,400*
Base unit with motor	2,100
Minrow pickup attachment	400
Row crop attachment	425
Mower bar attachment	600
Flail type forage harvester (pto)	900
Ensilage cutter & blower (stationary)	553

* 3 - 4 plow tractor required to operate pto harvester.

20' elevator	389
35' elevator	593
50' elevator	707

Corn sheller	430
Hammer mill	360
Portable feed grinder	553

15 bu. feed mixer	350
40 bu. feed mixer	500
80 bu. feed mixer	925

Portable batch grain dryer (130 bu.)	1,864
Stationary batch grain dryer (400 bu.)	4,975
Blower fan for bin drying (16")	325
Gas heater unit for bin drying	200

Flat bed wagon / rubber tires	437
Flare-box grain wagon / rubber tires	395
Wagon without bed	210
Self-unloading wagon (drag web)	1,174

Manure spreader (70 bu.)	509
Manure spreader (95 bu.)	643
Manure spreader (140 bu.) (pto)	866

Front-end tractor loader	436
Rear blade	211
Post hole digger	218
6 - 8 row boom sprayer	292
14-row boom sprayer	410
Jet nozzle fog sprayer	180

8' Fertilizer spreader	289
10' Fertilizer spreader	366
12' Fertilizer spreader	417

Small Auger feed trailer	412
Large Auger feed wagon	1,413

Following is an example comparing new and used machine prices.

Comparison of New and Used Machinery Prices
EXAMPLE ONLY

Machine	New	2 yr. old	5 yr. old
3 - plow tractor	\$3,149	\$1,670	\$1,190
4 - plow tractor	3,855	2,180	1,600
6' pull type combine (pto)	1,903	1,180	825
8' pull type combine (pto)	2,400	1,250	---
10' self propelled combine	6,205	3,120	2,330
Squate-type string tie baler (pto)	2,050	920	635

Miscellaneous Livestock Equipment Prices Paid by
Ohio Farmers, 1961

Item	Price
<u>Bulk milk tanks</u> (includes \$150 installation charge)	
200 gal.	\$1,728.00
300 gal.	2,051.00
400 gal.	2,396.00
545 gal.	2,714.00
625 gal.	2,930.00
<u>Stock tanks</u>	
180 gal.	\$28.00
300 gal.	38.00
Electric heated automatic hog water fountain (2 hole)	50.00
Electric heated automatic cattle water fountain (50-70 head)	115.00
100 gal. hog drinking fountain	49.00
Electric fountain heater	16.50
Kerosene fountain heater	4.00
<u>Metal self-hog feeders</u>	
18 bu. (8 door)	\$48.00 to 60.00
35 bu. (12 door)	66.00 to 80.00
50 bu. (12 door)	88.00
14 bu. feed cart (silage or grain)	65.00
Water hydrants	\$12.00 to 15.00 ea
1" plastic pipe	.20/ft
Pig brooder lamps	4.75 ea.
4-can milk cooler	\$329.00
8-can milk cooler	379.00
10 gallon milk cans	14.25

Buildings, Building and Fence Material Prices
Ohio, 1961

Item	Price
<u>Fencing Materials</u>	
Locust or Cedar line posts	\$ 0.65 ea.
Locust or Cedar end posts	3.00 ea.
7' steel posts	1.15 ea.
32" hog fence	1.45/rod
48" #9 - 12" stay woven wire	1.90/rod
4 - pt. barbed wire	11.00/80 rod r
Electric fence charger (battery type)	24.50 ea.
Battery for fence charger	3.30 ea.
Hi-Line fence charger	34.50 ea.
Electric fence insulators	6.85/100
Copper-covered electric fence wire	10.00/160 rod
<u>Building Materials</u>	
Ready-mix concrete (5-mile radius)	\$ 15.00/cu. yd.
Additional charge outside 5-mile radius	.06/mile
Concrete blocks (8 x 8 x 16)	.18½ ea.
Charge for laying blocks	.25 ea.
48" snow fence	10.75/50 ft.
Rough cut hardwood lumber (dry)	.10/bd. ft.
Rough cut hardwood lumber (green)	.06 - .10/bd. ft.
Hemlock or Fir dimension lumber	140.00/M
1" # 2 yellow pine	130.00/M
1" # 4 fir	120.00/M
#2 yellow pine shiplap	135.00/M
2" Creosote treated lumber	.20/bd. ft.
<u>Saw timber (standing)</u>	
#2 Hard maple	\$ 45.00/M
White Oak	35.00/M
Ash	50.00/M

Creosote Poles (delivered in county)

Top Diameter	Length	
5"	12'	\$ 5.50
5"	16'	7.12
5"	18'	8.42
5"	20'	9.67
5"	25'	14.19
5"	30'	18.48
6"	12'	7.06
6"	16'	9.33
6"	18'	10.96
6"	20'	12.60
6"	25'	17.29
6"	30'	24.24
7"	12'	8.88
7"	16'	12.69
7"	20'	15.88
7"	25'	20.94

Galvanized roofing	\$11.50/square
Aluminum roofing	17.50/square

Buildings (erected price)

Poultry buildings	1.40/sq. ft.
Hog finishing units	1.50-2.00/sq.ft.floor sp.
Farrowing barns (20 sow unit complete with stalls, electric heat pads, and insulation)	5.00/sq. ft.
Pole-type loafing barns (metal siding, open front and creosote kick panels - earth floor)	
3,000 sq. ft.	\$ 1.25/sq. ft.
4,000 sq. ft.	1.22/sq. ft.
4,600 sq. ft.	1.19/sq. ft.
5,500 sq. ft.	1.16/sq. ft.

For larger sizes use base price for the 5,500 sq. ft. building and add \$1.00 for each additional square foot.

Pole-Type Machinery Sheds (Metal siding, open front)

1,300 sq. ft.	\$ 1.52/sq. ft.
1,600 sq. ft.	1.46/sq. ft.
1,900 sq. ft.	1.38/sq. ft.
2,230 sq. ft.	1.33/sq. ft.
2,550 sq. ft.	1.29/sq. ft.

Larger sizes cost an additional \$1.00 per sq. ft. added.

For wood siding instead of metal siding add 7% to the total cost.
Materials cost approximately 70% of the total erected cost.

Pole-Type Wood-Slat Corn Cribs With Concrete Floor Erected

1,000 bu. capacity	\$ 900.00
4,000 bu. capacity	2,400.00
2,700 bu. double crib	2,700.00

Metal Bar-Mesh Corn Cribs With Concrete Floor Erected

800 bu.	\$ 495.00
1,100 bu.	620.00
1,500 bu.	647.00

Steel Grain Bins Erected

1,100 bu.	\$ 355.00
1,500 bu.	435.00
2,100 bu.	625.00
3,100 bu.	800.00

In-Storage Drying Bins Erected

1,000 bu.	\$ 495.00
1,250 bu.	535.00
1,500 bu.	740.00
2,000 bu.	830.00
3,000 bu.	1,000.00

Bins equipped with perforated floors and airducts to dry grains while in storage. This does not include cost of fans and heater. Cost of bins are approximately the same whether steel foundation ring or concrete floor is used. Materials for cribs and grainaries are 75% of erected cost.

Silos (Feedable silage capacity is about 85% of manufacturers stated capacity.)

Bunker (concrete floor with creosote wood sides)

100 ton (6' x 15' x 69')	\$ 774.00
200 ton (6' x 20' x 101')	1,264.00
300 ton (6' x 30' x 101')	1,527.00

Tower concrete stave

100 ton (12' x 40')	\$2,100.00
140 ton (14' x 40')	2,300.00
250 ton (16' x 50')	2,600.00
315 ton (18' x 50')	3,200.00
540 ton (20' x 60')	4,100.00

Individual Farrowing Houses

6' x 7'	\$ 74.00
11' x 8'	125.00
16' x 8'	150.00

Concrete feeding floor or paved yards (per sq. yd) 2.50 - 3.00